

Lauren Luksay (She/Her) – Engineering Physics

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Available for internships: May – December 2027

EDUCATION

University of British Columbia

September 2023 – Expected May 2029

Bachelor of Applied Science – Engineering Physics, GPA: 4.0 (92% average)

Coursework: Mechanics of Materials, Fluid Mechanics, Engineering Materials, Dynamics, Thermodynamics, Circuit Analysis

Awards: Women in Technology Scholarship (2026), Trek Excellence Scholarship – Top 5% of Faculty (2025), UBC Presidential Scholars Award, Governor General's Academic Medal, BC Excellence Award, BC Achievement Scholarship (2023)

SKILLS

Mechanical: SolidWorks, Onshape, Machine Shop Training Certification (lathe, mill, waterjet, drill press), 3D Printing, Laser Cutting

Electrical: KiCad PCB Design, Sensor Integration, Breadboard Prototyping, Soldering, Lab Instrumentation

Software: Python, C, Arduino/C++, Java

TECHNICAL EXPERIENCE

UBC Uncrewed Aircraft Systems (UAS)

September 2026 – Present

Aircraft Team

- Collaborate with a 60+ member team to design and manufacture a new **autonomous UAV** each year for the AEAC and SUAS international competitions.
- Develop airframe structures in **Onshape** using **carbon fibre composites**, **machined aluminum**, and **3D-printed parts**, coordinating with the Payload, Electrical, and Software sub-teams to integrate their systems into a light, balanced airframe.
- Responsible for designing the **suspended landing gear system** and the **propeller motor and ESC mounts** for the carbon fibre spars, engineering each for landing impact, thrust, and vibration loads while minimizing weight.

UBC Supermileage

September 2025 – August 2026

Powertrain Team

- Collaborated on the design and optimization of **powertrain systems** across the internal combustion engine and drivetrain subdivisions to maximize vehicle efficiency.
- Designed and modified **SolidWorks** assemblies for vehicle subsystems, including a PCB housing and revisions to the cable-actuated braking system.
- Contributed to concept generation and weighted decision matrix evaluation of potential **drivetrain gear systems** and assisted with **engine control unit (ECU)** tuning and testing.

UBC Chem-E-Car

September 2024 – August 2025

Mechanical Engineering Team

- Designed **SolidWorks** parts and assemblies for the drivetrain and chassis, iterating through **3D-printed prototypes** to optimize manufacturability, rigidity, and weight while meeting competition requirements.
- Developed the **motor, gear, and shaft system** and integrated it into the chassis for reliable power transmission and alignment.
- Engineered the chemical reaction and battery chambers for secure containment, ease of assembly, **sensor integration**, and reliable connection to the vehicle's power system.
- Won 1st place and Best Design at the Canadian Regional Competition, advancing to the Canada/US competition in Boston.

Autonomous Robot Design Competition

May 2026 – August 2026

Engineering Physics Design Project

- Mechanical lead** on a four-person team that designed, built, and tested an **autonomous robot for navigation and object-manipulation tasks**, completing multiple tasks at the August 2026 competition.
- Designed and integrated the robot's mechanical systems, including the **drivetrain**, **chassis**, **4-DOF arm**, and **gripper**, along with a claw-mounted **LiDAR** sensor used to locate objects and enable precise pickup.
- Modelled parts in **Onshape** and **machined, laser cut, and 3D printed** them, selecting materials and manufacturing methods to meet the strength, precision, and assembly requirements of each design.
- Rebuilt each major subsystem three or more times through iterative testing and redesign.
- Collaborated with electrical and software teammates to meet a shared competition goal, defining the mechanical requirements their systems depended on and troubleshooting the integrated robot together.